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10/798,632	03/11/2004	Michael V. Shuman	N0186 US	6665

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EXAMINER
RENDON, CHRISTIAN E

ART UNIT	PAPER NUMBER
3714	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *42-75* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *42-75* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *5/13/08*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION
Response to Amendment

This office action is in response to the amendment filed 5/13/08 in which applicant has added new

claims 60-75; responded to the claim rejections. Claims 42-75 are pending.

Claim Rejections - 35 USC § 103

Claims 42-46, 48-49, 51-53, 55-56, 58, 60-62 and 67 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Graf (4,645,459) in view of Lechner (US 2003/0059743).

1.   Regarding claim 42, Graf discusses an aircraft flight simulation (FS) as one of the many

possible applications for the invented system (col. 1, lines 15-17). The FS system contains a visual

subsystem for a vehicle simulator (col. 1, line 25) that receives flight data from the FS computer and

terrain data from a 'gaming area' database (col. 1, lines 17-21) and creates a scene from the

perspective of the pilot in the cockpit of the aircraft (col. 1, lines 21-24). The visual simulator uses the

terrain and flight path or vehicle control data (col. 1, lines 36-40) to determine the location and

viewing direction of the visual system of the vehicle (col. 7, lines 12-14). The scenes viewed by the

pilot can comprise of images that are fictitious or represent real-life places from anywhere around the

world (col. 4, lines 40-41). The images are organized into several databases: 2D, 3D-one axis & 3D-

two axis (col. 10, lines 38-44) providing the designer a large variety of images. Allowing the designer

to incorporate whatever he/she deems necessary for the scene or 'gaming area' (col. 1, lines 20-21).

Furthermore by creating a 'gaming area' or three dimensional environment the designer is fulfilling the

role of a map developer. However, Graf remains silent on how or where the designer attains a

database of real world images.

2.   Lechner discloses a system that automatically generates a terrain model for displaying a

predefined mission route (Abstract). The pilot defines the mission route and would use the system

disclosed by Lechner to practice their mission (par. 2, lines 1-13). Once a mission is defined by the

pilot a terrain model designer must also consider the surrounding area based on the route and the

characteristics of the aircraft like the turning radius and sensor range (par 3, lines 1-11) in order to create a complete and accurate description. The designer or map developer has two options for obtaining the information, either fly out to the real world area to obtain images of the mission terrain (par. 6, lines 1-6) a collection process considered time consuming and prone to errors (Lechner: par. 5, lines 8-10). The second option is to obtain the data from a variety of sources: the Joint Services Imaging Processing Station (JSIPS), the Gateway Data Navigator (GDN), the United States Imagery and Geospatial Information Services (USIGS), the Master Environment Library (MEL), weather service feeds, commercial database and the like (Lechner: par. 7, lines 1-8). All of the listed database examples are government/military organizations that function as map developer with an expertise in collecting and maintaining high resolution (Lechner: par. 6, lines 23-26) and accurate images of the real world (Lechner: par. 10, lines 3-6); which require a terrain model designer to complete and submit the appropriate documents requesting the data (Lechner: par. 7, lines 8-10). Therefore Lechner teaches acquiring a template or smaller database of real world images from a map developer or an organization with an expertise in collecting quality images as a means to save time (Lechner: par. 10, lines 3-6) and money.

3.   The Examiner would like to further clarify the interpretation of "transforming data representing the real-world locale into data representing an imaginary geographic locale". The Office's stand on this matter is that every map developer can create a real or imaginary map since the result is still a map. Therefore the idea of making an imaginary map based on a real map is a design choice strictly dependant on the map developer's vision of the final product. On a final note, the Graf reference teaches a game developer creating real or imaginary three dimensional worlds therefore performs the duties of a map developer as well. The Lechner reference teaches a game developer performing the duties of a map developer by altering a real-world database obtained from another map developer to the constraints of the project.

4.   Regarding claims 43-46 and 61-62, the navigational functions discussed by Graf are vehicle

positioning (col. 4, line 55) through rotational data: yaw, pitch and roll, which define the changing

attitudes of the aircraft (col. 16, lines 41-43) with respect to a gaming area or map of a fictitious or real

world location (col. 4, line 41) at a high level of accuracy and detail (col. 6, lines 55-57). As stated

above, the game developer or designer obtains the necessary images that will properly describe the

area accurately (Lechner: par. 3, lines 1-3) from a map developer (Lechner: par. 7, lines 8-10).

5.   Regarding claims 48-49, Graf discloses a computer or manual operator generating the scenes

that can contain a variety of objects that represent nature: mountains, lakes, bushes (Graf: col. 10,

line 11), rivers, etc (Graf: col. 10, line 24), trees, houses, roads, lights, rocks (Graf: col. 5, lines 22-

23). Therefore a person or a computer has the means to display a park. However the prior art fails to

disclose displaying a golf course. It would of have been obvious to one of ordinary skill in the art to

include a sand trap object in the 2D surface library to further expand the systems ability to create

diverse environments.

6.   Regarding claim 51, Graf discloses saving an object library of the database containing images

and surfaces (Graf: col. 3, lines 31-34) on an optical disc (Graf: fig. 15).

7.   Regarding claim 52, Lechner discloses collecting a database of images from other sources in

particular a commercial database. Therefore one of ordinary skill would expect a designer to pay or

lease for a commercial database even though Lechner fails to mention this detail.

8.   Regarding claims 53 and 55-56, Graf discloses operating a vehicle by the controlling the

vehicle's operator through a gaming area (Graf: col. 1, lines 36-38) that depicts a battle in either a

fictitious or real world setting (Graf: col. 4, lines 39-42). The battlefield contains buildings, tanks (Graf:

col. 5, lines 61-62), animals, girls, etc. (Graf: col. 5, line 24), therefore containing characters, game

logic and rules, vehicles and programs for rendering (Graf: col. 5, lines 63-67). Furthermore, the

database used by Graf is a combination of Computer Graphic Imagery (CGI) and Computer

Synthesized Imagery (CSI) resulting in a technology called CGSI. Therefore the database contains

3D images (Graf: col. 6, lines 50-51) that are inserted into a scene as objects (Graf: col. 2, lines 15-

21). Finally, the prior art is able to depict city/landscape since the surface databases contain many

different roads surfaces, buildings (Graf: col. 5, lines 49-50) and houses (Graf: col. 5, lines 21-24).

9.   Regarding claims 58, 67 and 75, the prior art discloses a template database that contains data

integrity as in road connectivity. The gaming area contains reference points for locating surfaces and

objects (Graf: col. 10, lines 3-4). As a means of producing the desired detailed accuracy (Graf: col.

10, line 25), the operator assigns two (X,Y,Z) coordinates or reference points to define the position

and height of a surface (Graf: col. 10, lines 10-24). Therefore if the perceptive of the road (Graf: col.

10, line 10) changes so will the reference points (Graf: col. 10, lines 20-22) insuring the integrity of the

road connections.

10.   Regarding claims 60-62, as stated earlier in the rejection of claim 42 a map developer provides

a template of real world data to a game developer who manipulates the data to their choosing. In

other words, the game developer creates an imaginary world (col. 4, lines 40-41) or a representation

of a real place (Lechner: par. 6, lines 1-4). Furthermore Lechner teaches a system for creating a flight

simulator that has two separate entities: map and game developer.

Claims 47, 50, 54, 57, 59, 63-66 and 68-74 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Graf et al. in view of Lechner and Huston et al. (US 6,146,143).

11.   The above description of the combination between Graf & Lechner & the limitations they

pertain too are considered with in this art rejection as well. Graf discloses a vehicle simulator and

uses the example of an aircraft simulator to describe the invention. However Graf is silent about

simulating a ground vehicle like a car or motorcycle as a possible application for the system (Graf:

col. 1, lines 15-17).

12.   Regarding claims 59 and 68-70, Houston discloses a ground vehicle simulator able to create a

traffic event on a roadway or road network during various types of weather conditions (Houston:

Abstract). It would have been obvious to one of ordinary skill in the art to combine the teaches of

Houston as a means to establish the necessary items needed to simulate a ground vehicle into the

system disclosed by Graf in order to further expand on the possible applications for the Graf system.

Furthermore Lechner teaches a system for creating a flight simulator that has two separate entities:

map and game developer.

13.   Regarding claims 47, 63-65 and 71-72, the system disclosed by Houston can create various

types of roads: highways, rural roads, city streets, etc and accurately simulate the features associated

with these roads (Houston: col. 4, lines 44-49) like the density, shape, and width of the road. Houston

also discloses lane dividers (Houston: Fig. 7), lane strip markings (Houston: Fig. 6), curbs, sidewalks

and crosswalk (Houston: Fig. 6), pavement (Houston: Fig 7), 3D cityscape and landscape (Houston:

Fig. 5-7), and fog or clouds (Houston: col. 2, line 50). Houston discloses that the driver must conform

to the relevant traffic rules (Houston: col. 5, lines 32-35) and even though traffic signals, signs and

speed bumps are not specifically mentioned they are items that are associated with the roads

(Houston: col. 4, lines 44-49), which are necessary to test the user's knowledge of the traffic laws and

etiquette.

14.   Regarding claims 50 and 73, the 'gaming area' contains geographical features (Graf: Fig. 1)

like natural structures like 2D rivers or man-made structures like 3D buildings. The operator of the

system is able to create a scene from the perspective of the pilot in the cockpit of the aircraft (Graf:

col. 1, lines 21-24). The scenes are constructed in three phases: land, water and sky surfaces (col. 5,

line 20). Graf discloses the surface library containing different road surfaces (Graf: col. 5, lines 50). A

scene can consisting of roads of different widths and shaped in any direction the user or computer

sees fit since either the computer or a manual operator create the scenes (Graf: col. 10, lines 7-10;

col. 7, lines 1-8). In other words, the operator is able to manipulate or transform the size, position,

rotation, etc of roads, creeks, railroads, streets, etc. based on the control functions (Graf: col. 8, lines

14-21).

15.   Regarding claims 54, 57, 66 and 74, Houston discloses a pavement (Houston: Fig 6-7),

however fails to mention anything about the pavement's color. It would have been obvious to one of

ordinary skill to color the pavement to help the driver further distinguish the road from the sidewalk

and identify the dividers (Fig. 7). Furthermore, Houston discloses images of a city and mentions

simulating roads of various kinds in a realistic manner. However is silent about displaying lampposts,

fences, shrubbery, and lawns. It would have been obvious to one of ordinary skill in the art to include

these items when the system is simulating a road in the suburbs.

Response to Arguments

Applicant's arguments filed 5/13/08 have been fully considered but they are not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner
should be directed to CHRISTIAN E. RENDÓN whose telephone number is (571)272-3117. The
examiner can normally be reached on 9 - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this
application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application
Information Retrieval (PAIR) system. Status information for published applications may be obtained
from either Private PAIR or Public PAIR. Status information for unpublished applications is available
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USPTO Customer Service Representative or access to the automated information system, call 800-
786-9199 (IN USA OR CANADA) or 571-272-1000.

CHRISTIAN E RENDÓN
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